February 1, 2021 Report Week: 4

DOH-Hillsborough County COVID-19 Surveillance Report

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SUMMARY: Over the past week (1/24 – 1/30), 3,912 COVID cases were identified in Hillsborough County, a decrease of 8% from 4,301 during the previous week. The 7-day moving **average of cases per day decreased from last week and is now at 559**. The 7-day moving average of **percent positivity (9.1%) decreased slightly** from the previous week. **Case rates are highest in the 25-34 age group**. Rates slightly decreased in all race/ethnicities during week 4, and **case rate was highest in Hispanics**. Case rates **remain stable Statewide and in all Tampa Bay area counties**. During the past week in Hillsborough County, **testing rate has remained stable**. Pinellas County is experiencing higher testing per 100,000 residents compared to Pasco and Hillsborough. Antigen testing results are being reported on average within the same day and PCR testing turnaround time has stayed consistent at around 2 days. Hillsborough County **hospitalizations for COVID decreased** and are now averaging 391 total COVID inpatients a day, down 7.1% from last week. Hillsborough County has **administered at least one dose of COVID-19 vaccine to 75,666 people, representing 6.6% of the county population.**

INFLUENZA/RESPIRATORY SURVEILLANCE: Influenza activity remains extremely low throughout Hillsborough County and the State. No outbreaks of Influenza or other respiratory pathogens have been reported this influenza season. Very few positive influenza labs have been received and no pediatric mortalities have been reported. Additional information and data about influenza surveillance is available at: http://www.floridahealth.gov/diseases-and-conditions/influenza/

Fig 1. Daily New COVID cases and percent positivity trends in Hillsborough County Residents. The **7-day moving average for percent positivity decreased slightly and is now 9.1%. The 7-day average number of new cases per day (559) decreased this past week and well below the highest 7-day average of 1007 observed on 1/11/2021.** Hillsborough County has reported 100,764 cases to date.

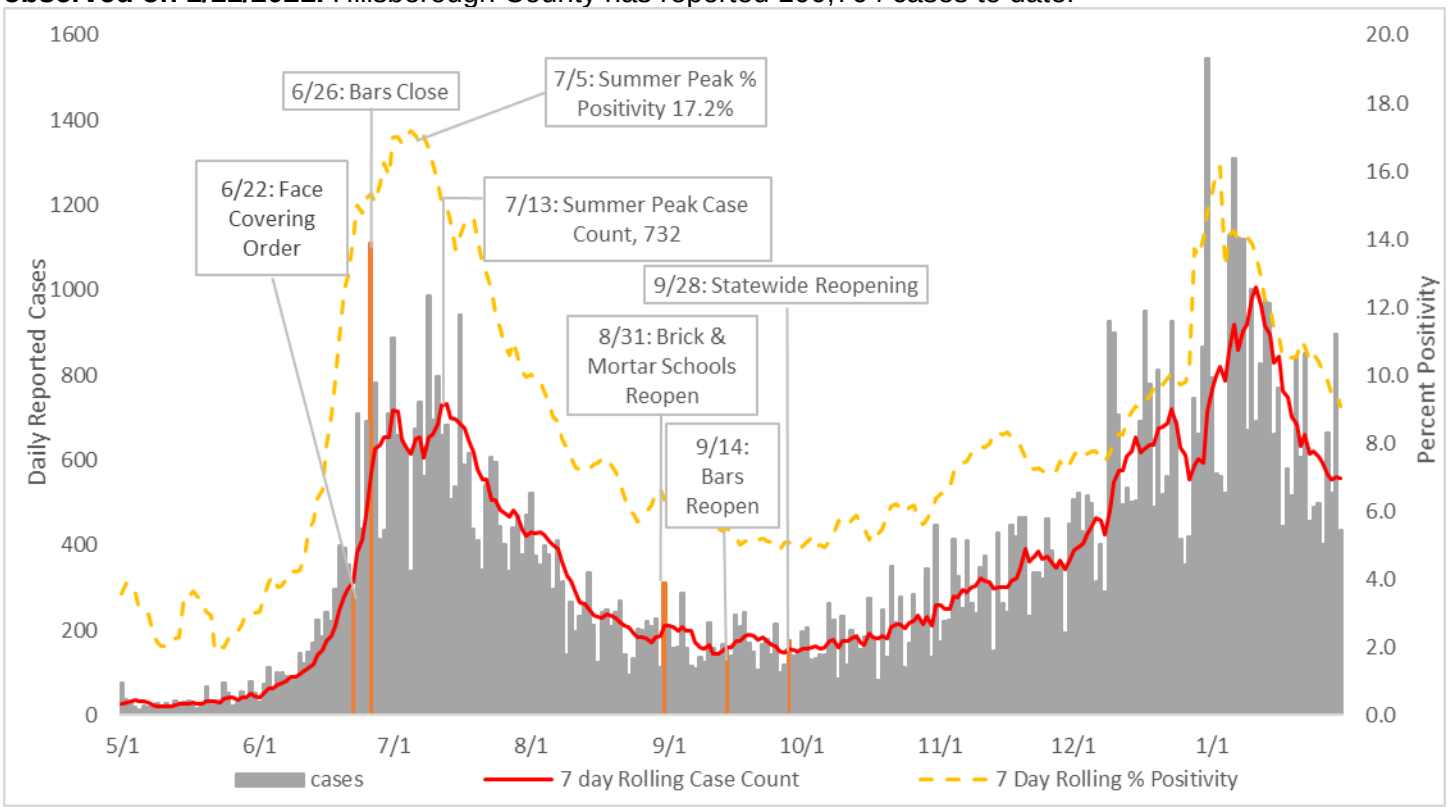
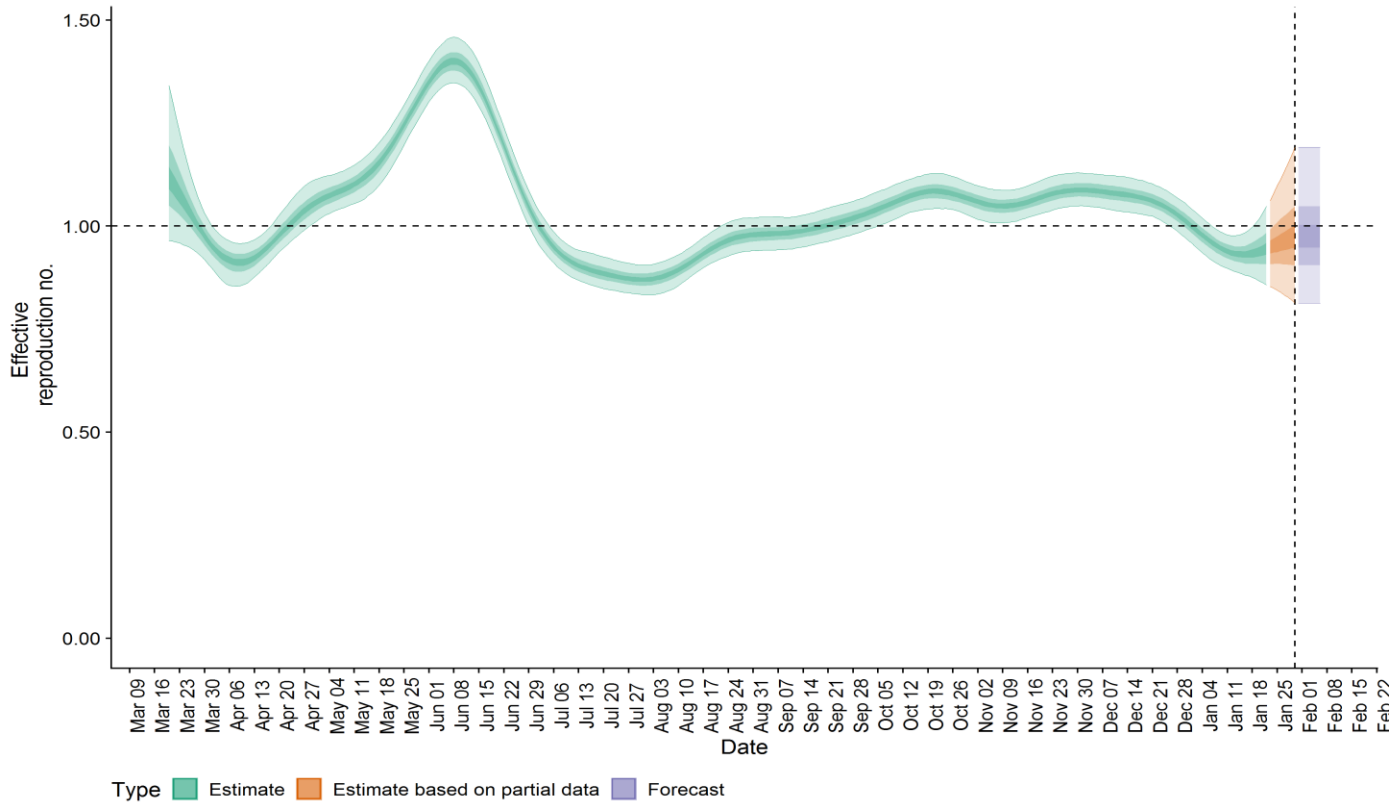


Fig 2 (below). R_t median estimate for Hillsborough County since March 2020. R_t estimate is calculated based on "nowcasted" new case rates (incidence). Nowcasted refers to the fact that the incidence data has been corrected for the disease progression, reporting delays and observation error. Figure 2 includes the historical R_t median estimates (green), the past weeks nowcasted R_t median estimate based on partial data (orange) and the next 7 days forecasted R_t median estimate (purple). The colors, from darkest to lightest, indicate 20%, 50% and 90% credible intervals (CI), respectively. An R_t above 1.0 means the outbreak is growing – or viewed another way, one person is infecting more than one additional person – and R_t below 1.0 means that outbreak is shrinking. **The current estimate of R_t for Hillsborough County is 0.97 (90% CI = 0.81-1.20)** a slight increase from last week where the estimate was 0.92 (90% CI = 0.77-1.10).



CASES, CASE RATES AND GROUP SETTINGS

Fig 3. Comparison of COVID 7-day average case rate per 100,000 population for Pinellas, Pasco, and Hillsborough Counties and the State of Florida for the past 90 days. All three **Tampa Bay Area counties decreased in case rates** over the past week. The **Florida case rate decreased** as well and is now **47.1** cases per 100,000.

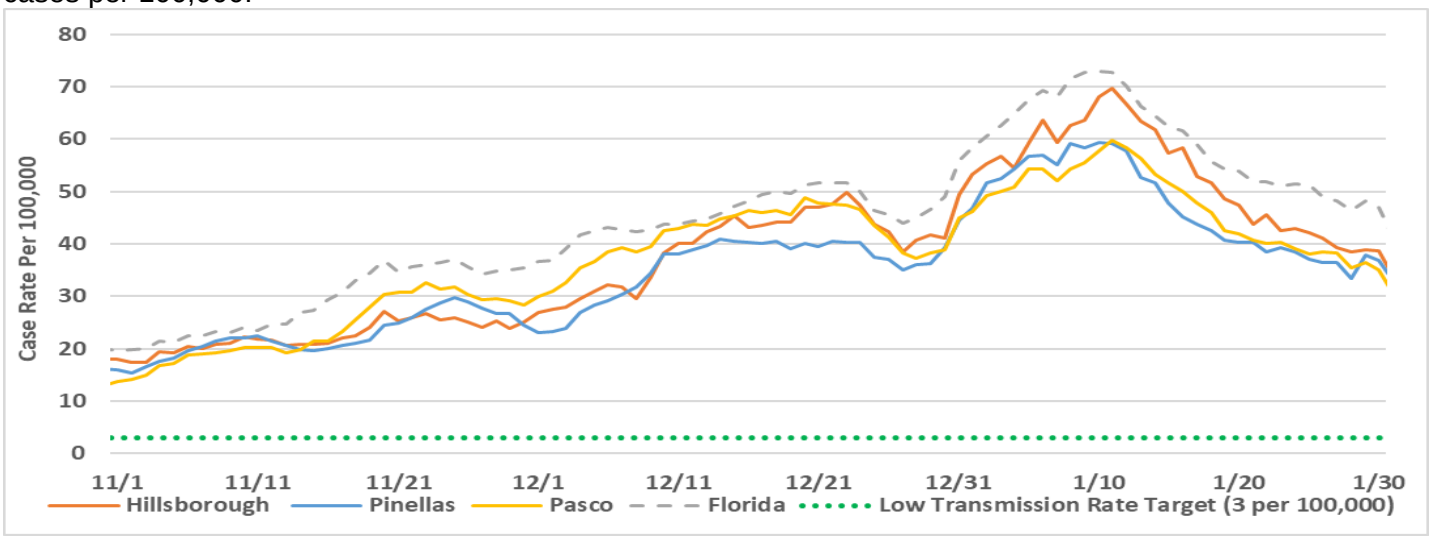


Fig 4. Comparison of COVID 7-day average case rate per 100,000 population by race and ethnicity for the past 90 days in Hillsborough County. Population data was acquired from FLHealth CHARTS. Cases with unknown race or ethnicity are excluded. Rates are slightly decreasing for most race and ethnicities, but **rates continue to reman highest among Hispanics.**

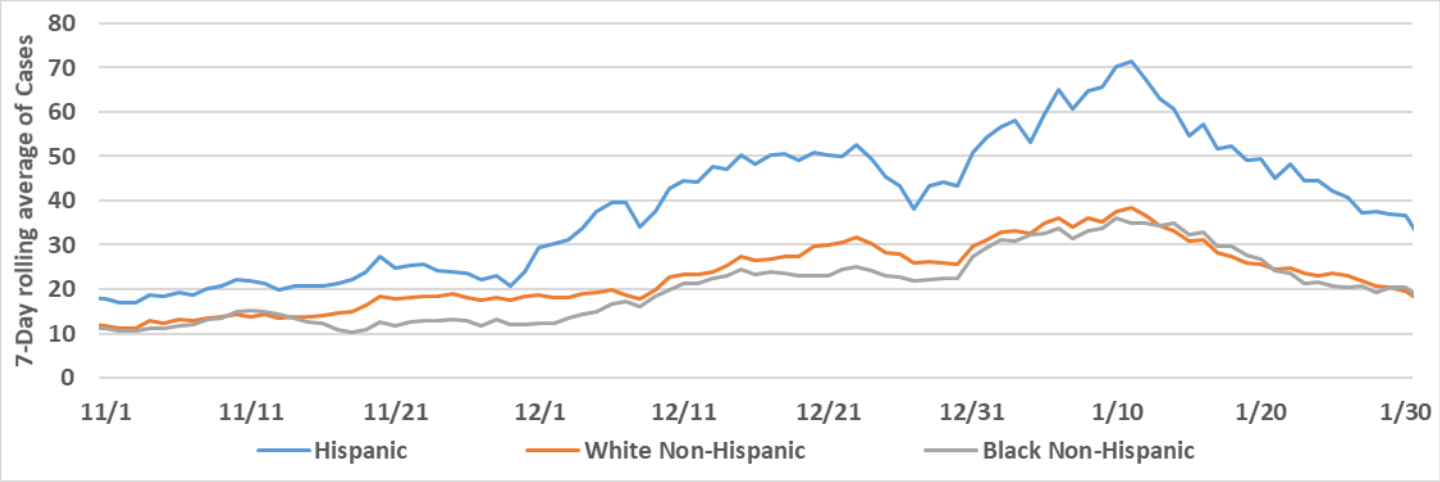


Fig 5. COVID 7-day average case rates per 100,000 population by age group for the past 90 days in Hillsborough County. **Rates across all age groups remained stable, with the exception of the 65+ age group that saw a decrease in cases. Case rate was highest in the 25-34 age group.**

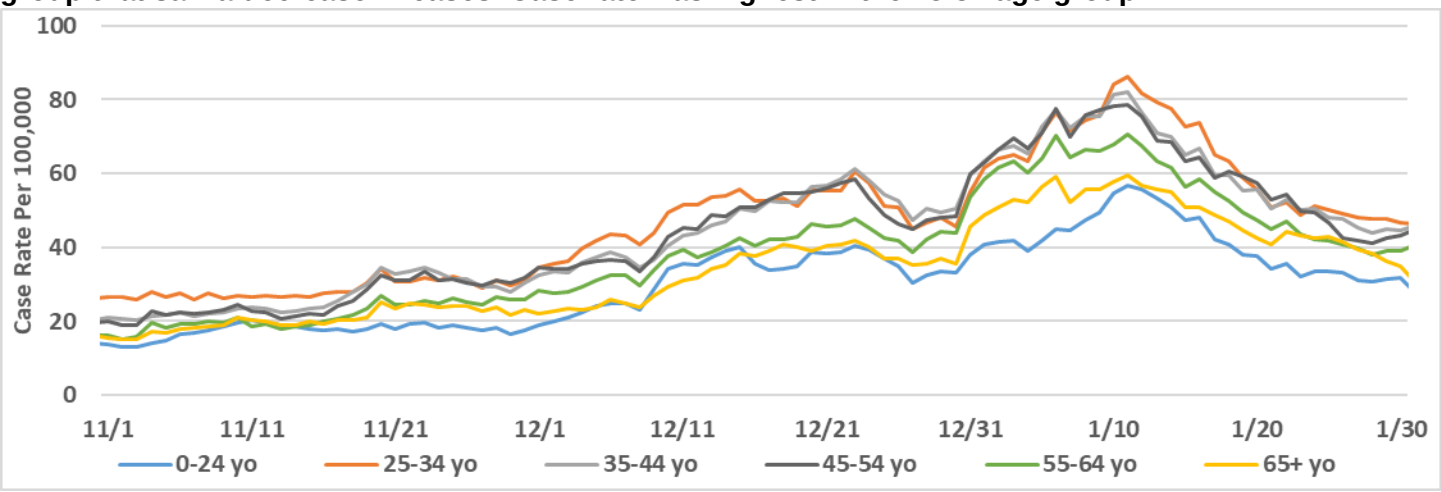


Fig 6. COVID pediatric and college-aged case rates per 100,000 population by age group, over the past 90 days in Hillsborough County. The 0-24 yo age group from Fig 5 (above), broken out into Preschool aged (0-4 yo), Elementary aged (5-10 yo), Middle/High School aged (11-17 yo) and College aged (18-24 yo). **Rates remain highest in college aged cases. Almost all age groups remained stable, but middle and high school aged cases slightly increased during the past week.**

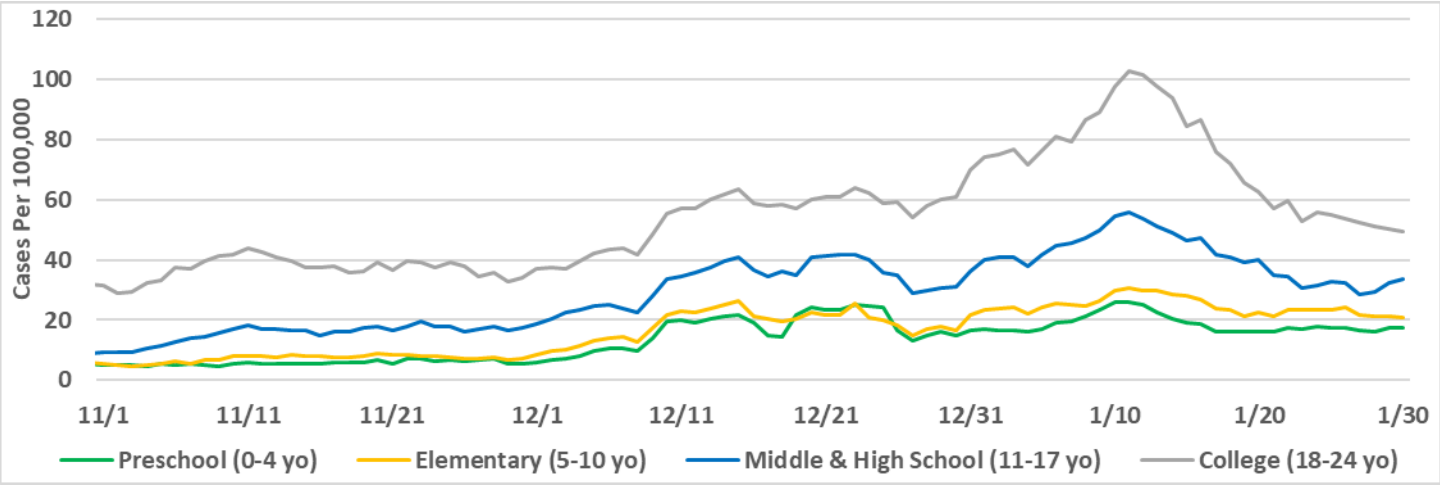
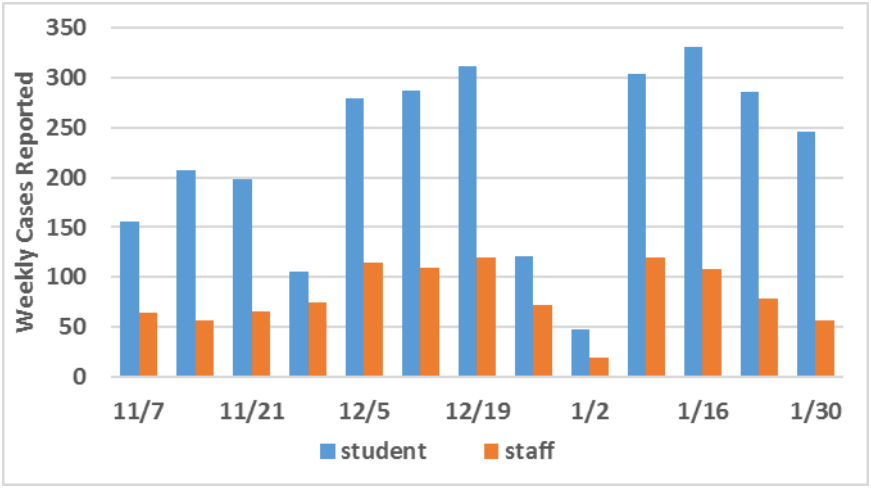


Fig 7. (right) Weekly reported COVID cases associated with **students and staff at K-12 schools** in Hillsborough County. COVID case must have been on campus during exposure period or infectious period to be counted. Public schools in Hillsborough County were closed for winter break for 2 weeks and the total number of cases decreased during those weeks. Public schools re-opened on January 4th, 2021 causing a spike in cases during week 1. Most cases are associated with family gatherings, travel and extra-curricular activities. Cases during week 4 **decreased for students and staff but cases from this week are still being investigated and numbers will change.**



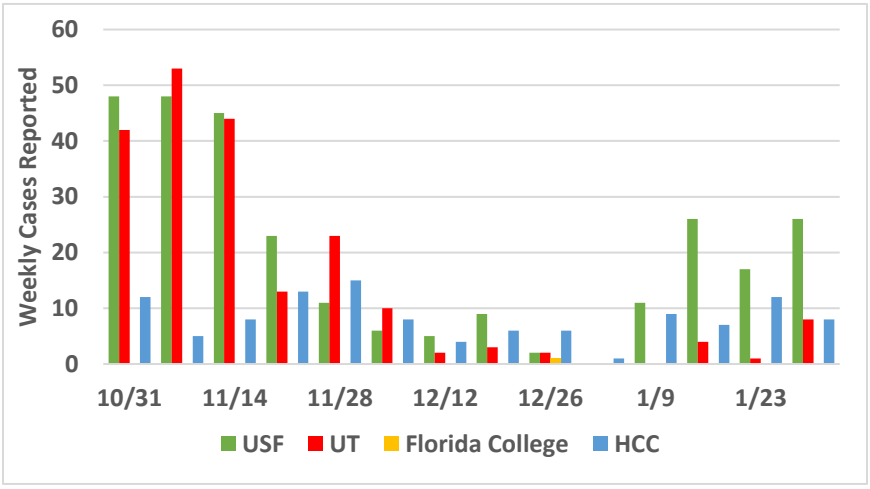


Fig 8. (left) Weekly reported COVID cases associated with **college students and staff** by reporting week. COVID case must have been on campus during exposure period or infectious period to be counted. Most college campuses were closed for winter break and have all now re-opened. **Low numbers of total cases were identified, but USF has reported the most cases since re-opening.**

Fig 9. Daily COVID cases associated with **LTCF residents and staff** for the past 90 days in Hillsborough County. COVID case must have been on LTCF site during the exposure period or infectious period to be counted. **Cases among residents and staff remained stable this past week.**

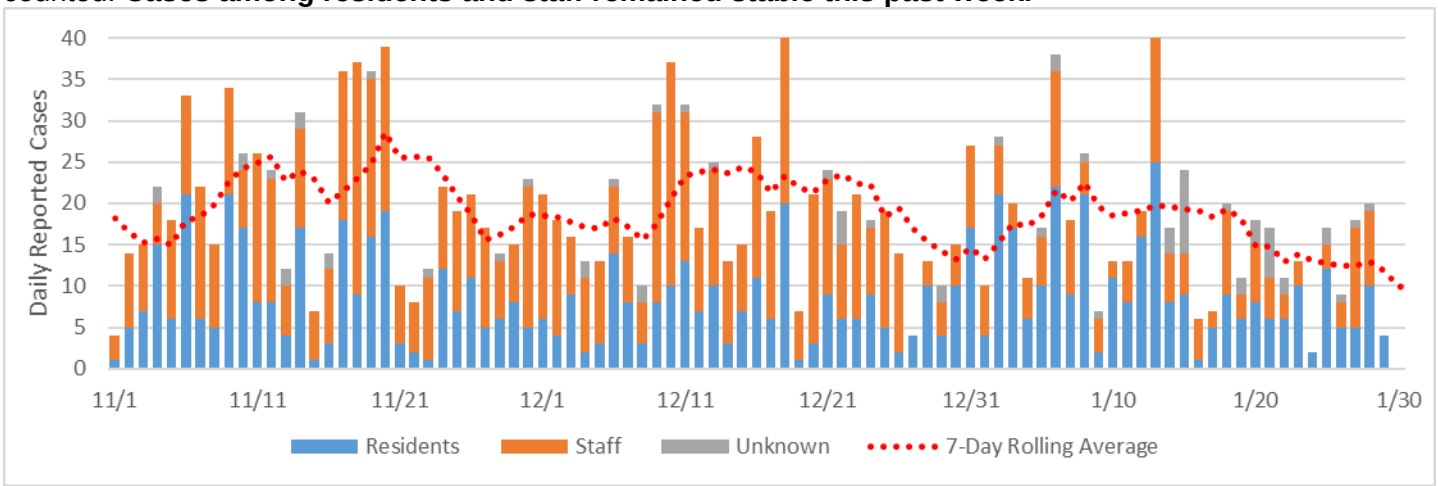
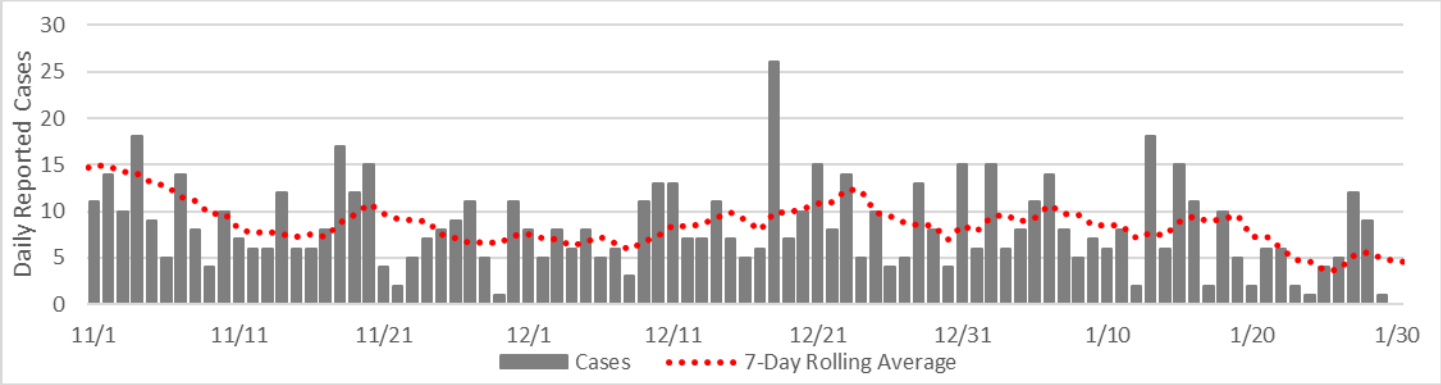


Fig. 10. COVID cases in **Health Care Workers (HCW)** for the past 90 days. To collect case occupation a case interview is required with the case, therefore the past week has missing/incomplete data, as case investigations are ongoing. Reported cases in HCWs have remained stable this past week.



TESTING RATE, TURN-AROUND TIME AND PERCENT POSITIVITY

Fig 11. Reported COVID testing volume and rate for Hillsborough County residents for the past 90 days. Tests are not de-duplicated by person or day; therefore, one person can have multiple tests counted across multiple days. During the past week **overall testing rate remained stable.**

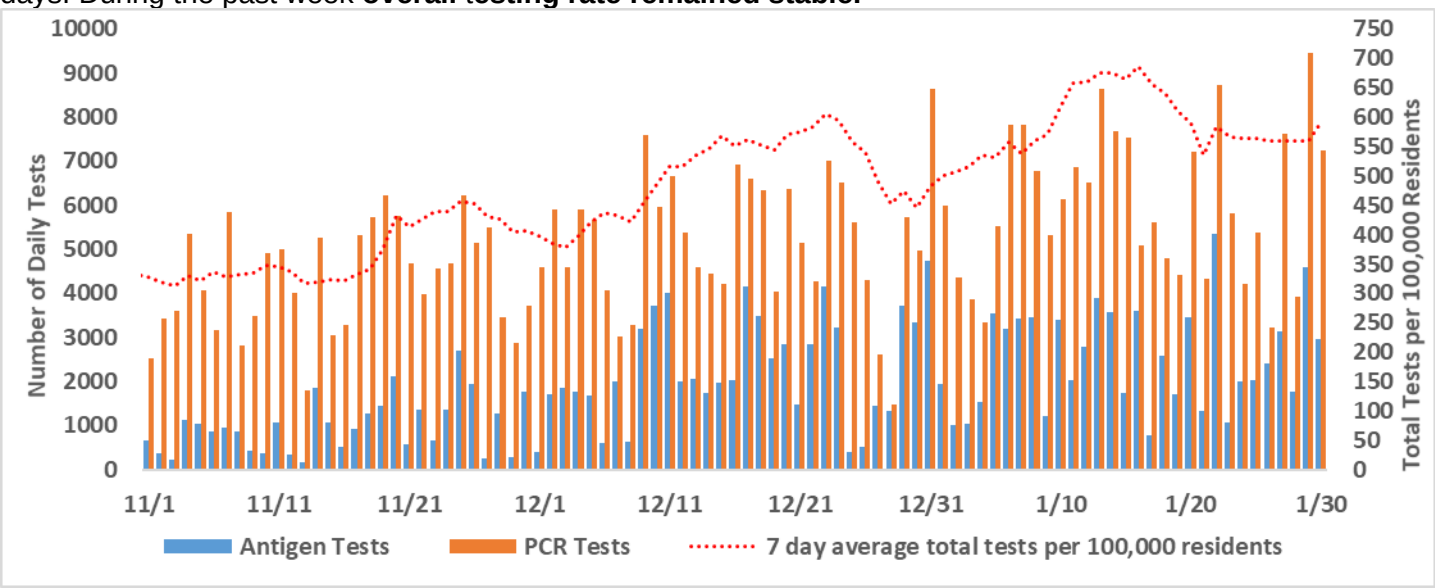


Fig 11B. Reported COVID 7-day average testing rate per 100,000 population for Pinellas, Pasco, and Hillsborough Counties and the State for the past 90 days. These counts are de-duplicated, where each person is only counted once per day, regardless of how many times they were tested. Testing rates remain stable in all counties. Testing rate continues to be highest in Pinellas County, but all Tampa Bay Area counties are below the state testing rate.

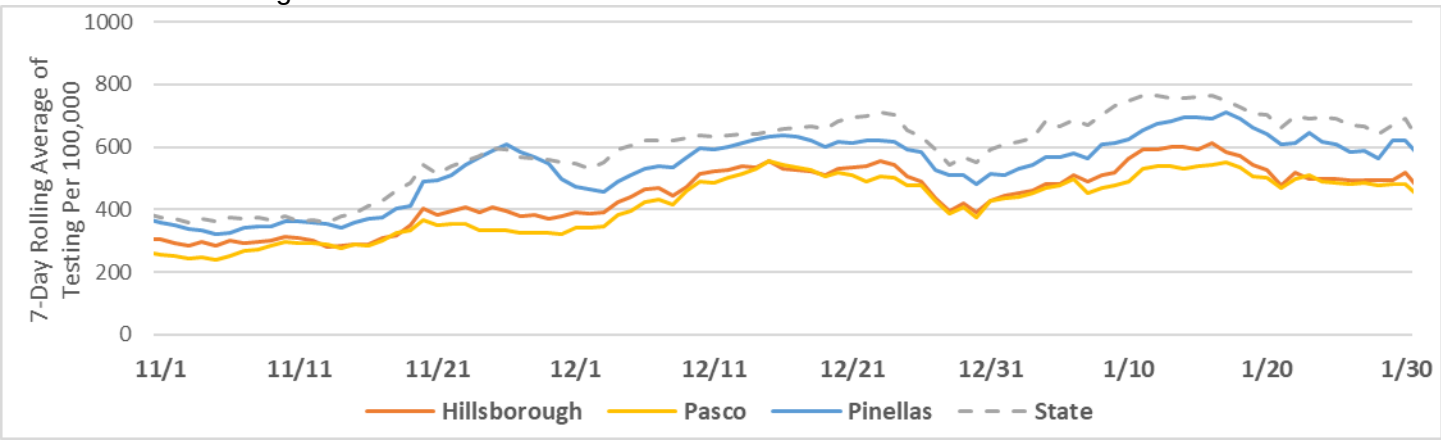


Fig 12. Average COVID testing turn-around-time (TAT) from specimen collection until results reported to DOH for the past 90 days. During November and December, we observed delays in the turnaround time for the reporting of antigen testing results from a few facilities - these results are filtered out of the analysis for that time (dashed line). **Average TAT for antigen tests is generally less than one day. PCR test average TAT remains around 2 days.**

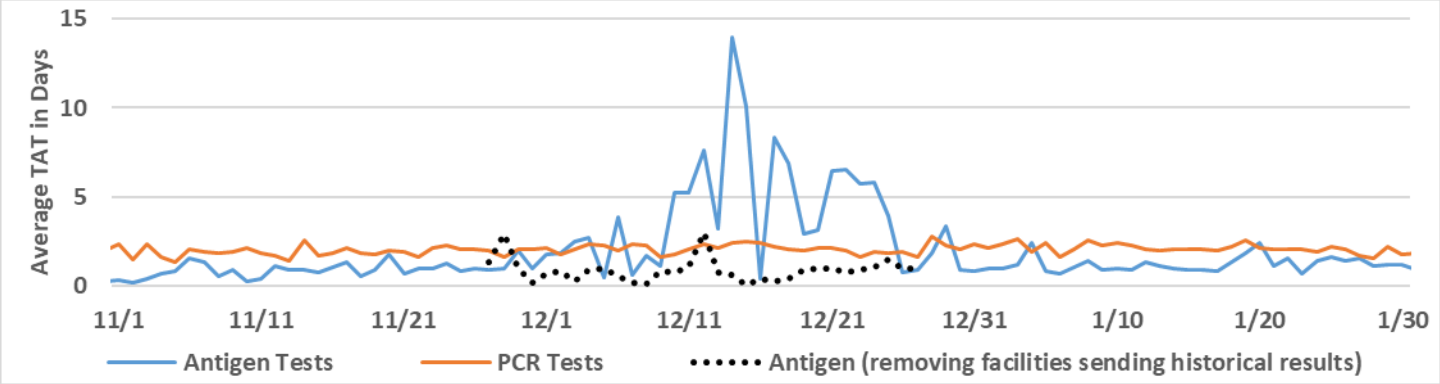


Fig 13. COVID testing percent positivity by age group for the past 90 days on a weekly average, based on Merlin case and lab data for Hillsborough County. Percent positivity was calculated by the date a lab was created that week for a positive COVID case divided by the total number of people tested that week. Decreasing percent positivity is indicating that fewer people tested positive, therefore the lower the percent positivity value the better, which is represented in green. Higher percent positivity values are represented in red. **Percent positivity decreased among every age group, but the highest positivity was in the 5-14 age group.**

	10/31	11/7	11/14	11/21	11/28	12/5	12/12	12/19	12/26	1/2	1/9	1/16	1/23	1/30
0-4 years	5.5%	5.7%	5.5%	4.1%	6.9%	6.9%	6.6%	8.1%	9.0%	9.9%	13.4%	8.4%	9.0%	8.1%
5-14 years	8.0%	8.2%	10.4%	7.9%	8.5%	9.2%	9.0%	9.3%	11.8%	17.1%	17.7%	13.6%	13.3%	10.4%
15-24 years	8.8%	10.6%	12.2%	8.7%	7.6%	8.4%	9.5%	10.3%	10.6%	14.9%	14.2%	9.7%	9.9%	9.1%
25-34 years	7.7%	8.0%	8.8%	7.8%	6.8%	8.4%	9.0%	9.4%	8.4%	12.7%	13.7%	11.7%	9.7%	8.9%
35-44 years	6.9%	7.5%	8.4%	8.7%	7.8%	8.5%	8.5%	10.0%	10.5%	14.6%	14.6%	11.7%	10.5%	9.0%
45-54 years	6.7%	7.7%	7.8%	8.6%	8.7%	8.6%	9.2%	11.4%	10.4%	15.1%	15.5%	12.1%	10.6%	9.3%
55-64 years	5.0%	6.3%	6.3%	6.0%	7.0%	7.1%	7.6%	9.0%	9.3%	14.2%	13.3%	10.7%	9.1%	8.2%
65-74 years	4.3%	5.9%	5.9%	5.6%	7.1%	6.0%	7.1%	9.0%	9.6%	13.8%	11.7%	10.1%	9.8%	8.0%
75-84 years	4.5%	6.5%	6.8%	5.9%	6.9%	5.8%	6.4%	8.2%	9.0%	12.7%	11.8%	9.7%	8.1%	7.6%
85+ years	4.2%	5.1%	5.0%	2.9%	3.6%	2.9%	4.8%	5.8%	5.7%	8.6%	8.8%	6.5%	7.9%	6.2%

Fig 13B. COVID testing rate by age group, per 100,000 population for the past 90 days on a weekly average, based on Merlin lab data for Hillsborough County. Testing rates indicate how many people in that specific age group for Hillsborough County are being tested to identify cases within the community. The higher the testing rate the better, indicated in green. The lower the testing rate is indicated in red. **Testing rate increased across almost all age groups under 64 years, but 65+ age groups decreased in testing. Rates remain highest in the 85+ age group, and lowest in the 0-4 age group.**

	10/31	11/7	11/14	11/21	11/28	12/5	12/12	12/19	12/26	1/2	1/9	1/16	1/23	1/30
0-4 years	94	95	93	124	106	136	289	277	185	164	173	220	191	218
5-14 years	90	96	95	137	122	175	288	256	209	168	386	256	193	239
15-24 years	284	291	276	355	414	458	553	513	504	445	557	776	462	499
25-34 years	339	325	308	394	460	498	566	548	668	562	623	702	565	592
35-44 years	293	285	271	375	375	440	519	521	510	464	527	586	491	512
45-54 years	294	283	275	363	356	425	487	474	449	440	497	533	469	464
55-64 years	324	302	298	404	379	429	492	476	441	435	498	543	477	479
65-74 years	334	275	270	379	332	371	435	432	361	352	437	474	421	398
75-84 years	418	322	321	465	385	452	484	491	423	410	511	568	490	480
85+ years	494	426	537	856	562	815	833	760	796	644	783	880	784	771

HOSPITALIZATIONS AND HOSPITALIZATION RATE

Fig 14. COVID admissions and inpatients in Non-ICU and ICU beds in Hillsborough County, based on the AHCA ESS Report. Hillsborough County inpatient hospitalizations for COVID slightly decreased this past week with 7-day average of 391 total COVID inpatients a day. Total inpatient **hospitalizations decreased by 7.1% from last week**. Daily COVID admits increased slightly this week and averaged 60 per day.

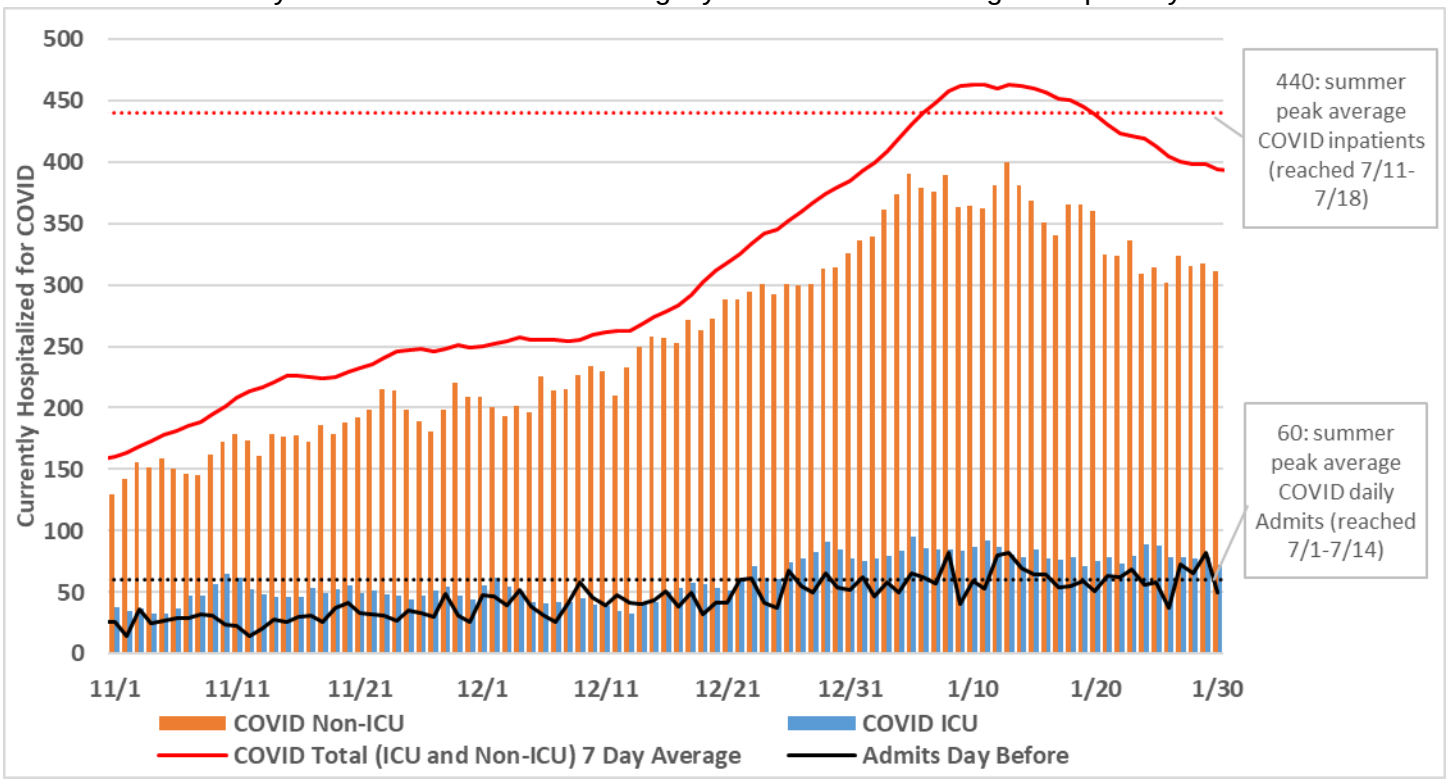


Fig 15. Percentage of Hospital and ICU beds occupied in Hillsborough County, based on AHCA ESS Report. Occupied beds increased to 84% for ICU beds and around 75% in Non-ICU beds.

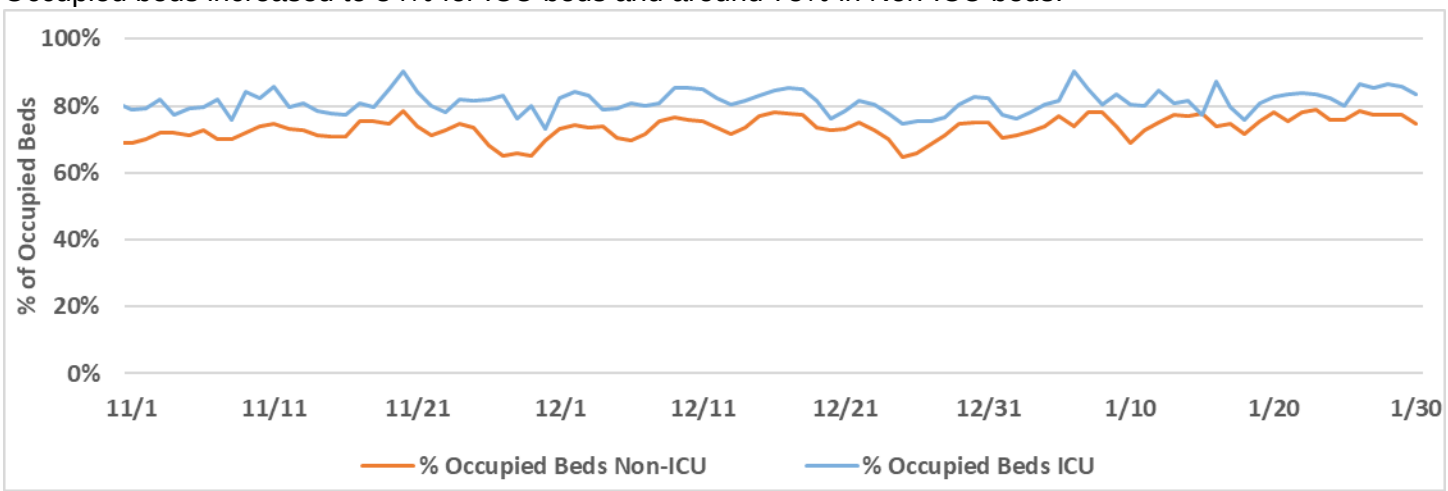


Fig 16. COVID Hospitalization rate per 100,000 by Race/ethnicity, over the past 90 days, based on Merlin case data. Cases with unknown race/ethnicity are excluded. Population data was acquired from FLHealth CHARTS. To collect case hospitalization a case investigation and/or interview is required with the case, therefore the past week has missing/incomplete data as case investigations are ongoing. Over the past week, **hospitalization rates decreased in Hispanic cases,** and rates remained stable among the other race/ethnicities.

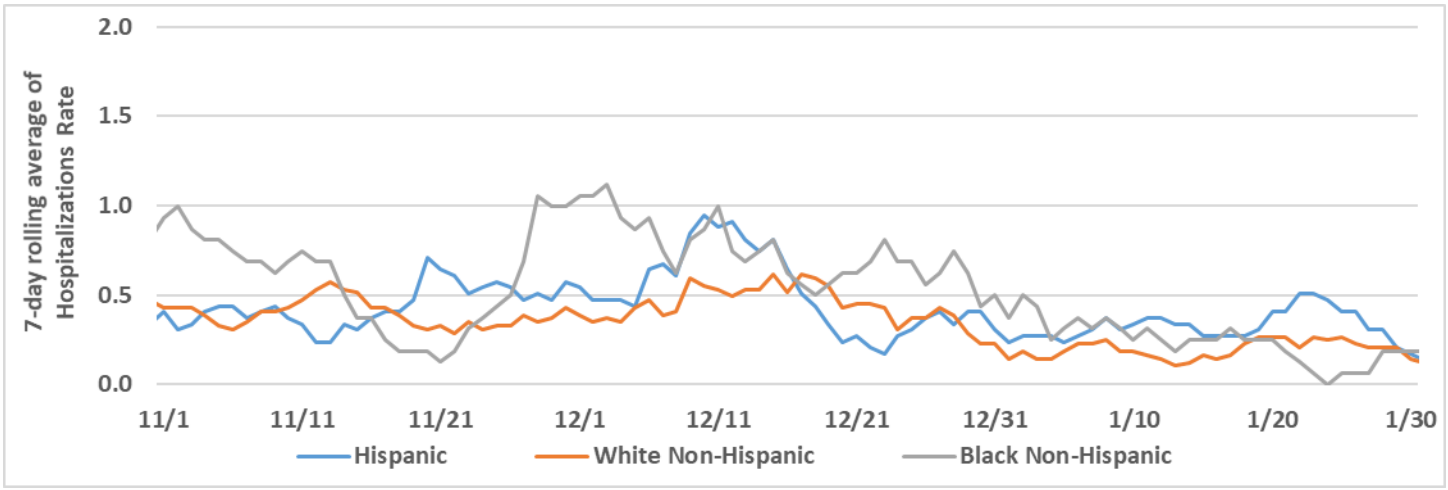
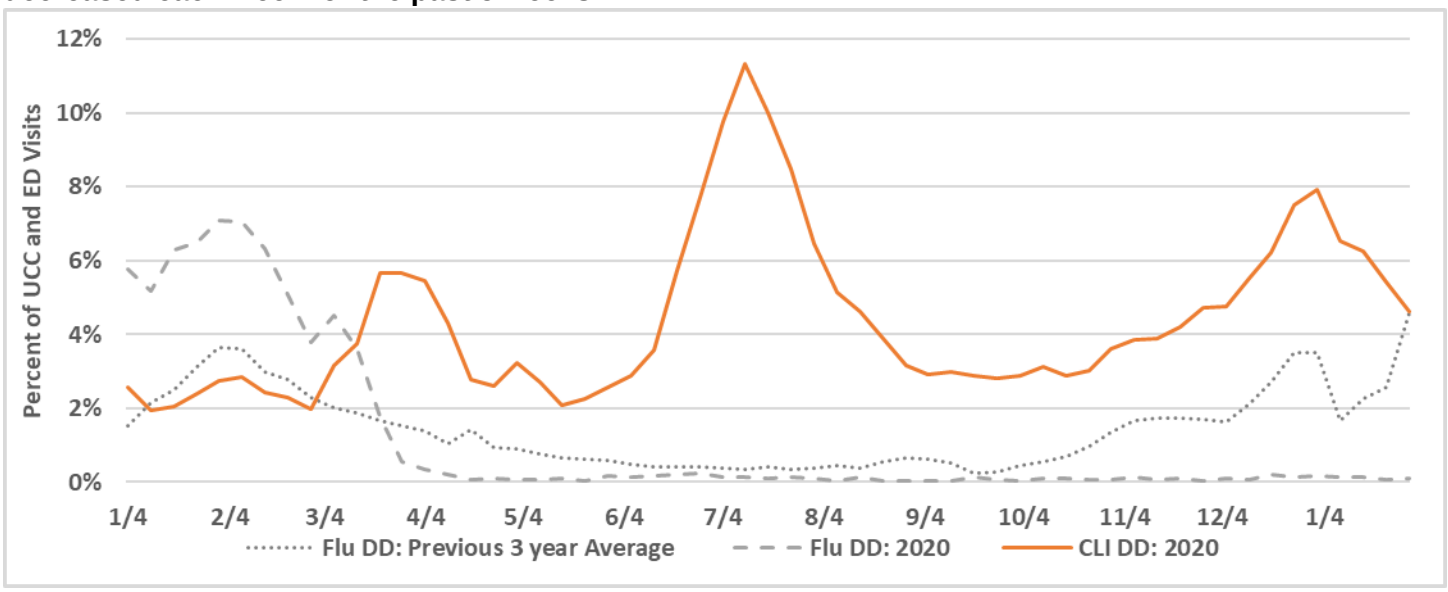


Fig 17. Percentage of Urgent Care Center (UCC), Hospital, and Emergency Department (ED) visits with a discharge diagnosis (DD) for influenza (flu) or COVID-like illness (CLI) in Hillsborough County, based on FL-ESSENCE reporting facilities, by reporting week. As additional DD data is received, the previous weeks could change in value. Visits remain well below the historical values for flu. **The percentage of visits for CLI has decreased each week for the past 5 weeks.**



DEATHS AND DEATH RATES

Important Note: COVID deaths are reported to DOH from a variety of sources including hospitals, Medical Examiners Offices and from the Vital Statistics database. The Vital Statistics Database Data is reported electronically and can have delays of 2-4 weeks from the date of death until the date reported. Data during this time frame should be assumed to be incomplete and is indicated by the shaded area in each graph below.

Fig 18. Daily COVID deaths reported by date of death over the past 90 days, based on Merlin case data and Vital Statistics Death data. Over the past 90 days, reported COVID deaths have ranged from 0-9 per day and **deaths are trending upward. Vital statistics data was not available after 1/24/2021, so additional deaths will likely be identified during this time.**

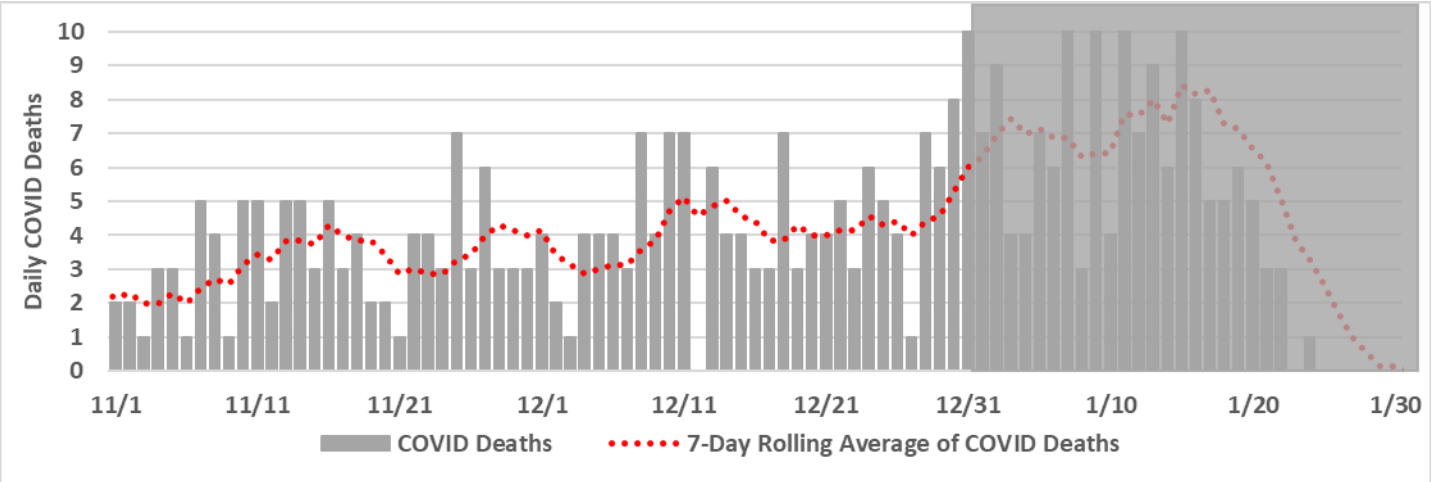


Fig 19. COVID 7-day rolling average death rate per 100,000 by race/ethnicity, for the past 90 days, based on Merlin case data and Vital Statistics Death data. Population data was acquired from FLHealth CHARTS. Cases with unknown race/ethnicity are excluded. Over the past 90 days, **death rates have been stable among all race/ethnicities. This could change as Vital Statistics data is not available after 1/24/2021.**

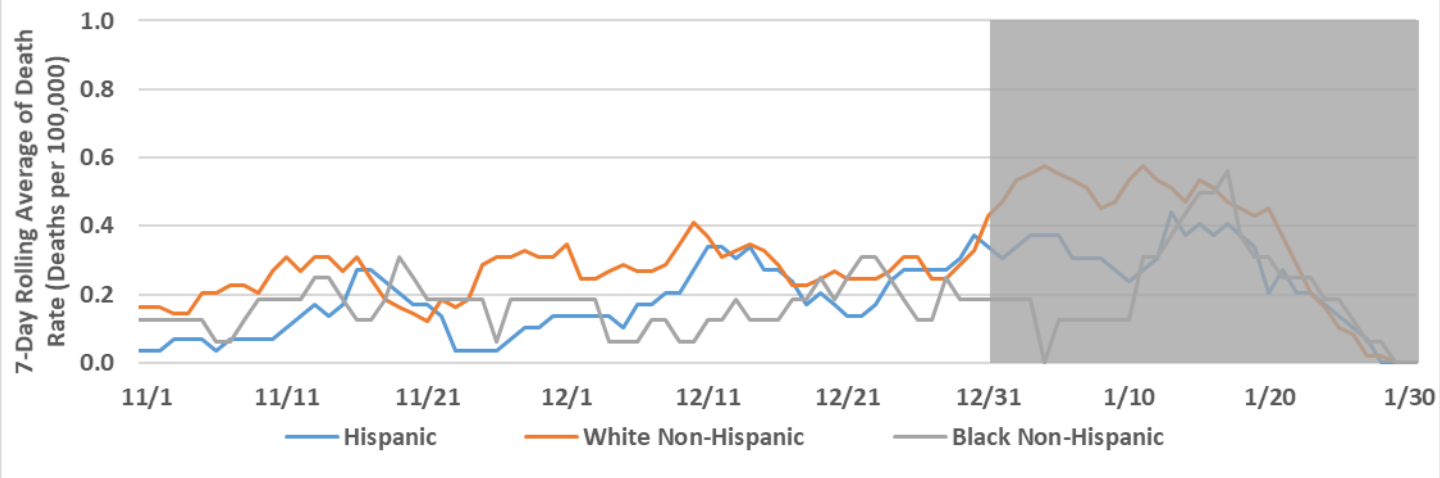


Fig 20. COVID Deaths associated with LTCFs as a percentage of all deaths, over the past 90 days, based on Merlin Data and Vital Statistics Death data. To date, 484 of the 1,293 (37%) COVID deaths in Hillsborough County were associated with LTCFs. Recently, LTCF associated deaths have accounted for about 1 death/day.

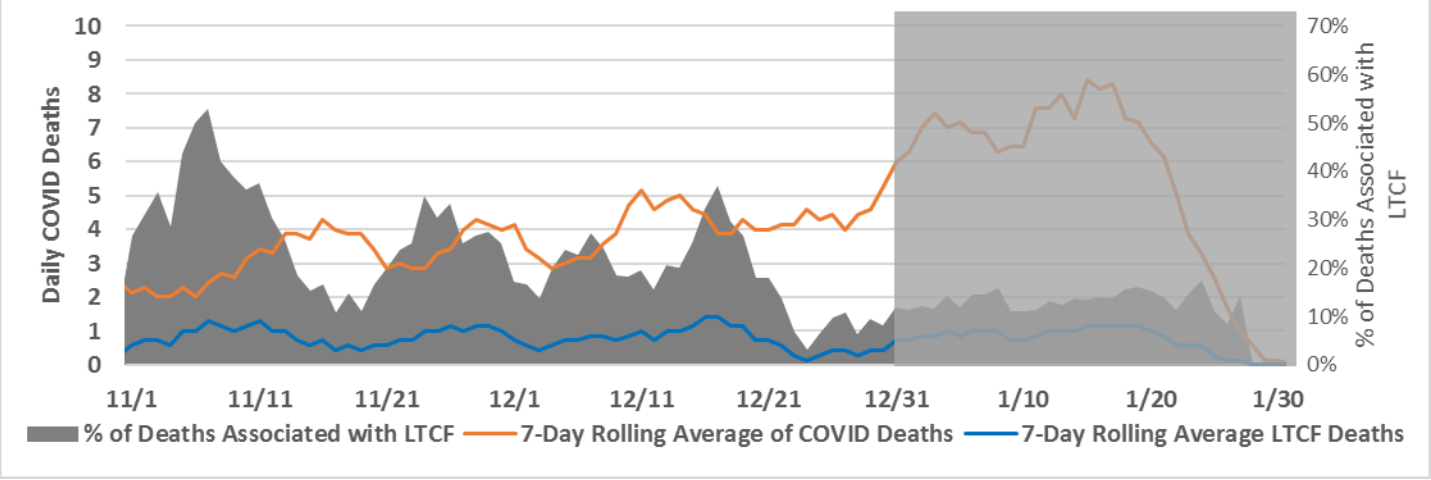


Fig 21. COVID cases, deaths, case fatality rate, and mortality rates by gender, age group and race/ethnicity in Hillsborough County.

Gender	Cases	Deaths	Case Fatality Rate	Mortality rate per 100,000 population
Female	52964	598	1.13%	81.01
Male	45916	695	1.51%	98.30
Unknown	1031	0	0.00%	
Total	**99911**	**1293**	**1.29%**	**89.47**
Age Group	**Cases**	**Deaths**	**Case Fatality Rate**	**Mortality rate per 100,000 population**
0-4 years	2134	0	0.00%	0.00
5-14 years	5804	1	0.02%	0.55
15-24 years	17306	2	0.01%	1.09
25-34 years	19283	1	0.01%	0.45
35-44 years	15772	16	0.10%	8.13
45-54 years	15126	48	0.32%	24.99
55-64 years	11693	143	1.22%	82.31
65-74 years	6738	285	4.23%	231.42
75-84 years	3722	423	11.36%	711.16
85+ years	1885	374	19.84%	1566.89
Race	**Cases**	**Deaths**	**Case Fatality Rate**	**Mortality rate per 100,000 population**
White	45605	867	1.90%	80.76
Black	11950	197	1.65%	76.39
Other	16609	178	1.07%	156.41
Unknown	25747	51	0.20%	
Total	**99911**	**1293**	**1.29%**	**89.47**
Ethnicity	**Cases**	**Deaths**	**Case Fatality Rate**	**Mortality rate per 100,000 population**
Hispanic	28669	291	1.02%	68.87
Non-Hispanic	41203	807	1.96%	78.91
Unknown	30039	195	0.65%	
Total	**99911**	**1293**	**1.29%**	**89.47**

VACCINATIONS

Fig 22. COVID-19 vaccines administered Statewide and to Hillsborough County residents. Numbers represent the number of doses (green) and people vaccinated (blue) and categories are exclusive (a person has either received “first dose” or “series complete”). Based on data that has been reported to FLSHOTS as of 1/30/2021.

Total Statewide COVID-19 Vaccine Doses Administered	**1,993,472**	**Total Hillsborough County COVID-19 Vaccine Doses Administered**	**95,616**
Statewide Florida Residents Vaccinated	**1,678,944**	**Hillsborough County Residents Vaccinated**	**75,666**
First Dose Only	1,364,416	First Dose Only	55,716
Series Completed	314,528	Series Completed	19,950

Fig 23. COVID vaccine doses administered to Hillsborough County residents by week, from the State published vaccination report. The "Estimated % of Eligible County Vaccinated" is calculated based on all vaccines administered to Hillsborough County residents (numerator) and eligible population age16 and older in Hillsborough County (denominator). **15,056 Hillsborough County residents were vaccinated during this past week**. 19,950 residents have completed the vaccine series.

Week End Date	Weekly Residents Vaccinated	Residents Vaccinated (Cumulative)	% Residents With At Least 1 Dose	Residents Completed Series (Cumulative)	% With Series Completed
12/19/2020	4,444	4,444	0.4%	0	0.0%
12/26/2020	4,920	9,364	0.8%	0	0.0%
1/2/2021	6,484	15,848	1.4%	0	0.0%
1/9/2021	11,884	27,732	2.4%	3,869	0.3%
1/16/2021	22,469	50,201	4.3%	7,695	0.7%
1/23/2021	10,409	60,610	5.3%	11,142	1.0%
1/30/2021	15,056	75,666	6.6%	19,950	1.7%

Fig 24. COVID-19 vaccine doses administered to Hillsborough County residents by gender and age. The "% of Eligible County Vaccinated" is calculated based on all vaccines administered to Hillsborough County residents (numerator) and eligible population aged 16 and older in Hillsborough County (denominator) for each demographic group.

Gender	First Dose	Series Completed	Total Residents Vaccinated	% Residents With At Least 1 Dose	% Residents With Series Completed
Female	33,237	12,381	45,618	7.6%	2.1%
Male	22,273	7,563	29,836	5.4%	1.4%
Unknown	206	6	212	-	-
Total	**55,716**	**19,950**	**75,666**	**6.6%**	**1.7%**

Age	First Dose	Series Completed	Total Residents Vaccinated	% Residents With At Least 1 Dose	% Residents With Series Completed
16-24 years	1,046	562	1,608	1.0%	0.3%
25-34 years	3,718	3,429	7,147	3.2%	1.6%
35-44 years	4,521	3,503	8,024	4.1%	1.8%
45-54 years	4,677	3,143	7,820	4.1%	1.6%
55-64 years	5,099	2,908	8,007	4.6%	1.7%
65-74 years	20,321	3,808	24,129	19.6%	3.1%
75-84 years	11,160	1,653	12,813	21.5%	2.8%
85+ years	5,174	944	6,118	25.6%	4.0%
Total	**55,716**	**19,950**	**75,666**	**6.6%**	**1.7%**

Additional COVID surveillance data, visualizations and information can be found at the links below:

- Florida Department of Health Statewide COVID Dashboard: https://experience.arcgis.com/experience/96dd742462124fa0b38ddedb9b25e429/
- Hillsborough County COVID Dashboard: https://www.hillsboroughcounty.org/en/residents/public-safety/emergency-management/stay-safe/covid-19-dashboard
- Hillsborough County School District Dashboard: https://hillsboroughschools.org/doc/2744/school-reopening-plan/frequently-asked-questions/coviddash/

Additional notes about data sources and data collection for the charts and tables used in this report:

Merlin reportable disease database: Merlin serves as the state's repository of reportable disease case reports, including automated notification of staff about individual cases of high-priority diseases. Access to Merlin is available only to approved Department of Health employees. COVID data is entered in Merlin in multiple ways. Data fields associated with Electronic Lab Reports (ELRs) or electronic case reports will be auto populated when available. Additionally, specific to COVID cases, the Healthy Together APP allows for individuals to complete and report demographics, symptomology and other data elements to DOH. Case investigators and contact tracers also make attempts to interview each COVID case to collect or verify demographics and other important public health data. As the data is collected from case investigations the Merlin database will be updated. Some data elements, such as deaths and group care associations (Jails, LTCFs, and Schools) are reviewed by local and state staff for accuracy. Data within Merlin is considered provisional and is subject to change.

AHCA ESS Report: Florida's Agency for Health Care Administration (AHCA) requires all licensees providing residential or inpatient services to use the Emergency Status System (ESS) database for reporting its emergency status, planning or operations. In response to COVID the Agency added new reporting requirements related to COVID cases and hospitalizations at AHCA licensed facilities.

ESSENCE-FL: The Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) is a biosurveillance system that collects emergency department chief complaint data from participating hospitals and urgent care centers in Florida, call data from the Florida Poison Information Center Network, reportable disease data from the Merlin database, and mortality data from the Florida Office of Vital Statistics. The objective of this surveillance system is to provide the epidemiologist with the data sources and analytic tools needed to identify outbreaks or unusual trends more rapidly, leading to a timelier public health response.

FLSHOTS: Florida SHOTS is a free, statewide, centralized online immunization information system that helps healthcare providers and schools keep track of immunization records to ensure that patients of all ages receive the vaccinations needed to protect them from dangerous vaccine-preventable diseases. FLSHOTS is a program of the Florida Health Immunization Section and is supported by the Centers for Disease Control and Prevention.

Vital Statistics: The Florida Department of Health, Bureau of Vital Statistics manages the official database and records for deaths in the State of Florida. When a death occurs, the cause of death and medical certification is completed by a medical certifier, which includes physicians, medical examiners and autonomous advanced practice registered nurses. As these medical certifications occur, data and records are managed and stored within the Vital Statistics database.

FLHealth CHARTS: Powered by Florida's Bureaus of Community Health Assessment and Vital Statistics. CHARTS stands for Community Health Assessment Resource Tool Set, and compiles multiple datasets from a variety of agencies into a single source. Several data sources include Agency for Health Care Administration (AHCA), Florida Department of Health, Florida Department of Elder Affairs, Florida Department of Law Enforcement, and many others. A complete list of data sources can be found at http://www.flhealthcharts.com/Charts/documents/training/DataSources.pdf Data queries such as population estimates, birth rates, death rates, marriage rates, and reportable disease statistics can be found using this tool.